Practice with Speed and Velocity

Example ① $S = \frac{d}{t}$

$= \frac{48\ m}{3\ s}$

$= 16\ m/s$ ② ①

$d = 48\ m$

$t = 3\ s$

$S = ?$

1) ① $S = \frac{d}{t}$

$t = \frac{d}{S}$

$= \frac{550\ mi}{55\ mi/hr}$

$= 10\ hr$ ② ①

$S = 55\ mi/hr$

$t = ?$

$d = 550\ mi$

4) $\bar{v} = \frac{\bar{d}}{t}$

$\bar{v} = ?$

$\bar{d} = 275 \text{ mi NW}$

$= \frac{275 \text{ mi NW}}{6 \text{ hr}}$

$t = 11\text{am} - 5\text{am}$

$= 6 \text{ hr}$

$= 45.83 \text{ mi/hr NW}$

6) $\bar{v} = \frac{\bar{d}}{t}$

$\bar{v} = 150 \text{ km/hr TYFH}$

$\bar{d} = ?$

$\bar{d} = \bar{v}\, t$

$t = 2.5 \text{ hr}$

$= (150 \text{ km/hr TYFH})(2.5 \text{ hr})$

$= 375 \text{ km TYFH}$

Speed and Velocity Calculations

1) $\bar{v} = \frac{\bar{d}}{t}$

$\bar{v} = ?$

$\bar{d} = 12\text{ m right}$

$t = 3\text{ s}$

$= \frac{12\text{ m right}}{3\text{ s}}$

$= 4\text{ m/s right}$

4) $\bar{v} = \frac{\bar{d}}{t}$

$\bar{v} = 10\text{ m/s up}$

$\bar{d} = 219\text{ m up}$

$t = ?$

$t = \frac{\bar{d}}{\bar{v}}$

$= \frac{219\text{ m up}}{10\text{ m/s up}}$

$= 21.9\text{ s}$

6) $\bar{v} = \frac{\bar{d}}{t}$ $\bar{v} = 30$ km/hr east

$t = 2.5$ hr

$\bar{d} = \bar{v}\,t$ $\bar{d} = ?$

$= (30 \text{ km/hr east})(2.5 \text{ hr})$

$= 75$ km east